FORENSICS A FINAL EXAM Hmmmmm

CHAPTER 1

Identify and describe the job of all forensic specialists
Know the units and what happens in each
Place specialists in the correct units
List 3-4 things the first officer on the crime scene must do
Know what 2 methods are used to record a crime scene
List several examples of physical evidence that should be collected from the victim or crime scene
Define forensics
List several things a finished sketch should have
List and/or recognize the four search methods used
Give several examples of how to stop contamination of a crime scene from the beginning and throughout the investigation
Explain what is meant by a "Chain of custody"
Explain what a "control" is and why it would be gathered
Give several reasons why allowances would be made regarding search without a warrant
Why do I say "Expert Witness" in quotes?

BROKEN GLASS AND FINGERPRINTS

Differentiate between radial and concentric fracture lines.
Which fractures are on the side of the impact and which are on the opposite side of the glass?
Which hole is larger, the entrance or exit?
Can you determine the order in which the shots were fired?
Know the types of loops(2), arches(2) and whorls(4)
Be able to identify and label ridge characteristics
How many point by point comparisons are necessary?
How do we lift prints from non-porous, smooth materials?
How do we lift prints from paper?
What is AFIS?
Be able to compare prints to determine if they are a match
What is the difference between visible, latent and plastic prints? Can you give examples?
How can we preserve prints? Trials could take years!
When do humans develop fingerprints?
What other parts of the body can produce prints that can be used in a trial?
Do prints provide class or individualistic characteristics?

HAIR AND FIBERS

Distinguish between natural and un-natural fibers. Be able to give examples of each
Identify fur, silk, cotton, wool and polyester microscopically
Know that fur comes from animals, cotton from plants, silk from insects, wool from sheep or yaks etc
Be able to explain how natural substances are processed into natural fibers
Recognize that fibers are usually class characteristics. Only when "odd" or unusual do we get individualistic characterization
Recognize that fibers are analyzed by microscopes, flame tests, and microspectrophotometry
Be able to compare microspectrophotometry peaks of crime scene and control samples to determine if they are the same.
Know the types of scale patterns in hair, the medullary patterns and the root types
Define catagen, anagen and telogen
Describe several characteristics forensic specialists would use to compare samples. Recognize characteristics of hair from microscope pictures
Know the 3 main parts of hair and the 3 main parts of the shaft

Explain how we know the body part hair came from. Race?
Know uniserial vs. multiserial
Know what melanin does and what cortical fusi are

DRUG TEST

Know the 5 main groupings of drugs and be able to give examples of each
Determine if drugs are natural or synthetic and, if natural, what plant etc they come from
Give reasons why drugs are used
Differentiate between psychological and physical dependence
For stimulants and depressants you need to know how the neurotransmitters of the CNS are affected and how/why this causes withdrawal etc
Know definitions like: narkitikos, analgesic, anabolic steroid, hallucinogen, THC etc
Describe physical and behavioral affects of taking anabolic steroids
Know what substance in marijuana makes it hallucinogenic
Be able to describe some social impacts of being addicted to drugs
Know the 5 main drug identification tests: Screening vs. confirmation tests

know 2-3 color tests (name of test, drug and color)

- explain microcrystalline test
- relate chromatography to Rf values and comparisons
- describe how mass spectrometer works
- Compare UV spectro…. to infrared spectro…..

Use your knowledge of the lab to describe one test that can differentiate between alka seltzer, aspirin and tylenol
How can U.V light aid in drug identification?

ARSON

Define fire, arson, combustion, streamers, residue, accelerant, ignition devices etc
Recognize that combustion is an exothermic reaction
List and explain factors that control fire speed and patterns
List main chemicals used by arsonists
Describe ways to search the fire scene and collect and preserve evidence
List ways to analyze fire scenes (labs/tests etc)
List ways to prevent fires
Differentiate between fires and explosions and what makes an explosion occur
Differentiate between Low and high explosions and primary and secondary explosions